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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,111	07/15/2003	David T. Jennings III	BRU025	8623

7590 12/18/2003

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EXAMINER

BLACKNER, HENRY A

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 12/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/620,111	JENNINGS III ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Henry A. Blackner	3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-12, and 14-20 is/are rejected.
- 7) ☒ Claim(s) 7 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:  
    1. ☐ Certified copies of the priority documents have been received.  
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

1. CEN Document: prCEN/TS 13763-27 (NMP 898/FABERG N 0090 D/E) E 2002-06-19, paragraph 21, line 12.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a) because they fail to show that pin 13 is grounded, figure 4, as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 18' (figure 2) and 21 (figure 3). A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office

action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to because of the following informality: In the phrase “flag indicates whether or not the device has been *been* detected on the bus”, paragraph 44 lines 4-5; suggest deleting the duplicate term “been”, for clarity.

Appropriate correction is required.

### ***Claim Objections***

Claims 1-7 and 9-20 are objected to because of the following informalities:

1. In regards to claims 1 and 3, the term “detonator”, line 3, was previously identified as an “*electronic* detonator”.
2. In regards to claims 2-7, the preamble “The detonator of claim”, should read as “The *electronic* detonator of claim”.
3. In regards to claims 2 and 9, the term “detonator”, line 1, was previously identified as an “*electronic* detonator”.
4. In regards to claims 3, 4, and 10, the term “precautions”, line 2, was previously identified as “*safety* precautions”.
5. In regards to claims 5, 11, 18, and 19, the term “precautions”, line 1, was previously identified as “*safety* precautions”.
6. In regards to claims 9-13, the preamble “The system of claim”, should read as “The *electronic blasting* system of claim”.

7. In regards to claim 12, the term "detonator", line 4, was previously identified as an "electronic detonator".
8. In regards to claim 14, the term "detonator", line 9, was previously identified as an "electronic detonator".
9. In regards to claims 15 and 20, the term "detonator", line 6, was previously identified as an "electronic detonator".
10. In regards to claim 16, the term "detonator", line 2, was previously identified as an "electronic detonator".
11. In regards to claim 17, the term "detonator", line 1, was previously identified as an "electronic detonator" and the term "precautions", line 2, was previously identified as "safety precautions".

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 14 recites the limitation "the identity" in line 6. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States

Claims 1-6, 8-12, and 14-20 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. Patent No. 5,014,622 to Jullian.

In regards to claim 1, Jullian clearly illustrates, an electronic detonator (EBC1) for use in an electronic blasting system (10) including a blasting machine (20) and a logger (18), wherein the detonator is configured and/or programmed to enter a blaster mode when it is attached to a blasting machine and to enter a logger mode when it is attached to a logger, in figures 1 and 7, column 3 lines 30-42, lines 48-50, and lines 55-68, column 4 lines 1-6 and lines 25-36, column 5 lines 14-18, lines 40-54, and lines 59-62, column 9 lines 3-8, lines 10-17, lines 23-33, and lines 41-48, and column 10 lines 25-37 and lines 41-54.

In regards to claim 2, Jullian clearly illustrates, wherein the detonator is further configured and/or programmed to implement safety precautions when it is not in blaster mode, in figure 7, column 9 lines 3-8, lines 10-33, lines 41-53, and lines 55-68, and column 10 lines 1-10, lines 17-20, lines 25-37, and lines 41-54.

In regards to claim 3, Jullian clearly illustrates, the detonator further includes a firing capacitor (C2), wherein the precautions include one or more precautions selected from the following group: a) automatic discharging of a firing capacitor, b) preventing acceptance of any charge command, and c) preventing a charging switch (Q3) from closing, figure 7, tables 1 and 2, column 12 lines 17-23, lines 31-55, and lines 66-68, and column 13 lines 1-14.

In regards to claim 4, Jullian clearly illustrates, the detonator further includes a firing capacitor (C2), wherein the precautions include one or more precautions selected from the

following group: a) preventing a firing capacitor from charging, and b) preventing acceptance of any firing command, in the rejection of corresponding parts of claim 2, above.

In regards to claim 5, Jullian clearly illustrates, wherein the precautions include preventing a detonator-firing switch (SCR) from closing, in the rejection of corresponding parts of claim 2, above.

In regards to claim 6, Jullian clearly illustrates, wherein the blasting machine has a first operating voltage range and the logger has a second operating voltage range and the detonator is configured and/or programmed to distinguish between the first and second operating voltage ranges, in column 10 lines 25-37 and lines 41-54.

In regards to claim 8, Jullian clearly illustrates, an electronic blasting system (10) including an electronic detonator (EBC1) wherein the system is configured and/or programmed so that the electronic detonator enters either a blaster mode or a logger mode depending upon whether it is attached to a blasting machine (20) or a logger (18), in figures 1 and 7, column 3 lines 30-42, lines 48-50, and lines 55-68, column 4 lines 1-6 and lines 25-36, column 5 lines 14-18, lines 40-54, and lines 59-62, column 9 lines 3-8, lines 10-17, lines 23-33, and lines 41-48, and column 10 lines 25-37 and lines 41-54.

In regards to claim 9, Jullian clearly illustrates, wherein the detonator is configured and/or programmed to implement safety precautions when it is not in blaster mode, in figure 7, column 9 lines 3-8, lines 10-33, lines 41-53, and lines 55-68, and column 10 lines 1-10, lines 17-20, lines 25-37, and lines 41-54.

In regards to claim 10, Jullian clearly illustrates, wherein the electronic detonator includes a firing capacitor (C2) and wherein the precautions include the disabling of the firing capacitor, in the rejection of corresponding parts of claim 9, above.

In regards to claim 11, Jullian clearly illustrates, wherein the precautions include preventing a detonator-firing switch (SCR) from closing, in the rejection of corresponding parts of claim 9, above.

In regards to claim 12, Jullian clearly illustrates, wherein the system includes a blasting machine having a first operating voltage range, wherein the logger has a second operating voltage range, and wherein the detonator is configured and/or programmed to distinguish between the first and second operating voltage ranges, in column 10 lines 25-37 and lines 41-54.

In regards to claim 14, Jullian clearly illustrates, a method of selecting between a logger mode and a blaster mode in an electronic detonator (EBC1), comprising the following steps: a) attaching to an electronic detonator, a master device that is either a blasting machine (20) or a logger (18), without first manually setting the electronic detonator in a mode that is selected based on the identity of the master device, b) issuing one or more identifying signals from the master device, and c) operating the detonator in a mode that corresponds to the particular identifying signal issued from the master device, in figures 1 and 7, column 3 lines 30-42, lines 48-50, and lines 55-68, column 4 lines 1-6 and lines 25-36, column 5 lines 14-18, lines 40-54, and lines 59-62, column 9 lines 3-8, lines 10-17, lines 23-33, and lines 41-48, and column 10 lines 25-37 and lines 41-54.

In regards to claim 15, Jullian clearly illustrates, wherein a blasting machine has a first operating voltage range and a logger has a second operating voltage range, wherein step b)



includes operating the master device at its respective operating voltage range, the method further comprising the step of the detonator distinguishing between the operating voltage ranges, in column 10 lines 25-37 and lines 41-54.

In regards to claim 16, Jullian clearly illustrates, further comprising the step of the detonator effecting safety precautions when it is not in blaster mode, in figure 7, column 9 lines 3-8, lines 10-33, lines 41-53, and lines 55-68, and column 10 lines 1-10, lines 17-20, lines 25-37, and lines 41-54.

In regards to claim 17, Jullian clearly illustrates, wherein the detonator includes a firing capacitor (C2) and wherein the precautions include the disabling of the firing capacitor, in the rejection of corresponding parts of claim 16, above.

In regards to claim 18, Jullian clearly illustrates, wherein the precautions include preventing a detonator-firing switch (SCR) from closing, in the rejection of corresponding parts of claim 16, above.

In regards to claim 19, Jullian clearly illustrates, wherein the precautions include preventing a detonator-firing switch (SCR) from closing, in the rejection of corresponding parts of claim 16, above.

In regards to claim 20, Jullian clearly illustrates, wherein a blasting machine has a first operating voltage range and a logger has a second operating voltage range, wherein step b) includes operating the master device at its respective operating voltage range, the method further comprising the step of the detonator distinguishing between the operating voltage ranges, in column 10 lines 25-37 and lines 41-54.

*Allowable Subject Matter*

Claims 7 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following documents show the state of the art in the field of Detonator utilizing selection of Logger Mode or Blaster Mode based on sensed voltages.

U.S. Patent No. 6,618,237 B2 to Eddy et al.

U.S. Patent No. 6,173,651 B1 to Pathe et al.

U.S. Patent No. 6,000,338 to Shann

U.S. Patent No. 5,894,103 to Shann

U.S. Patent No. 5,520,114 to Guimard et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry A. Blackner whose telephone number is 703-305-4799. The examiner can normally be reached on 09:15 - 17:45.

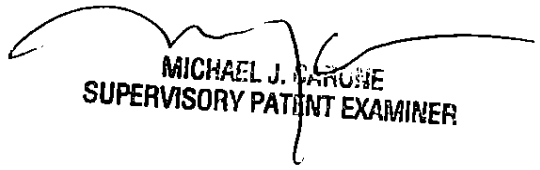
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 703-306-4198. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9326.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5771.

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Art Unit: 3641

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13 December 2003



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SUPERVISORY PATENT EXAMINER